7.1 Introduction

This chapter outlines a specific program of improvements to the Boulder street network to be implemented over the next 25 years.

These projects are based on the prioritization approach outlined in section 6.5 and specifically take into account the fact that Boulder's streets are the principal infrastructure for all modes.

The policies set out in figure 6-45 at the end of chapter 6 assign the highest priority for functional efficiency and functional capacity investments to "multimodal corridors."

Multimodal corridors are defined as roadways serving both bicycle primary routes and transit trunk routes. There are six east-west and four north-south multimodal corridors (see figures 7-1 and 7-2).

7.2 Multimodal Corridors

In the descriptions that follow, multimodal corridors are arranged according to their east-west and north-south orientation. The locations of these corridors are displayed in the map provided following this page.

Following the corridor descriptions, table 7-1 provides specific lists of project needed within these corridors and the estimated costs of these projects.

figure 7-1. east-west multimodal corridors

IRIS AVENUE: Broadway to 28th Street

PEARL PARKWAY: 28th Street to Gunbarrel

VALMONT: 28th to Pearl Parkway Extension

ARAPAHOE AVENUE: 8th Street to East Boulder Limits

BASELINE ROAD: 9th Street to East Boulder Limits

IRIS AVENUE

The Iris corridor will not require motor vehicle or bicycle capacity improvements. Laneage at the intersection of Iris and Broadway was revised in 1995 and this intersection is expected to operate satisfactorily in the future.

The intersection of Iris and 28th Street will continue to experience motor vehicle congestion and delay. However, grade separation of this intersection to remedy this congestion would be impractical and is not planned.

On-street bike lanes run the length of Iris. Sections of these bike lanes fall below the desired standard for bike lane width, a fact that was discussed at several of the Bicycle Roundtable meetings conducted in connection with development of the Bicycle System Plan.

The consensus (not unanimous) opinion emerging from this discussion was that widening Iris just to achieve wider bike lanes was impractical, and the money would be better spent expanding the bicycle system.

However, the discomfort some bicyclists feel while using these lanes has been a factor in the adoption elsewhere in this Update of a wider minimum lane width for on-street bike lanes.

Also, if future opportunties to widen the bike lanes on Iris in connection with other projects occur, the lanes will be widened.

Transit access along Iris is barely adequate today. As transit service is increased, transit access will be improved. This will include improving stops and shelters and adding transit centers as well as making improvements in the sidewalk and crosswalk system.

A significant discontinuity in the pedestrian system occurs between Folsom and 28th Street. This will also be corrected.

PEARL PARKWAY

The 1989 TMP proposed a major roadway project in this corridor. The "Pearl Parkway Extension" was shown as a four-lane principal arterial on new alignment from the end of the existing Pearl Parkway northeast and onto the alignment of 63rd Street past Jay Road and into Gunbarrel. This $10,000,000 project was to be funded with both Transportation Fund and Transportation Excise Tax Fund moneys.

A new forecast of traffic to and from the Gunbarrel area has been undertaken -- with and without the addition of the Pearl Parkway -- using Scenario D as the forecast basis.

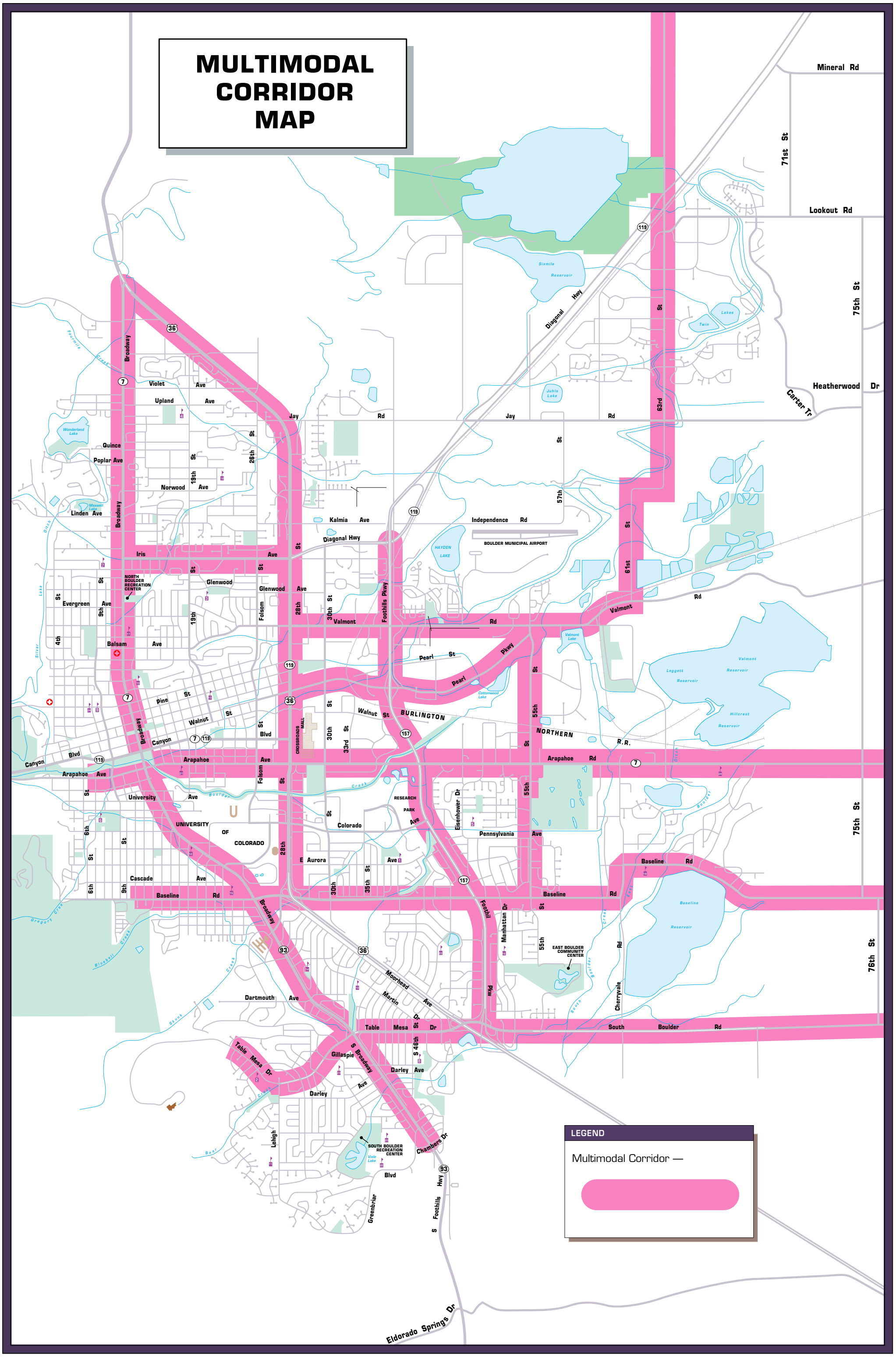
Without the Parkway, the 63rd/Andrus/61st connection would carry about 9,000 vehicles per day. If the Parkway were constructed as a 4-lane roadway, traffic in this corridor would increase to about 17,000 vehicles per day.

Construction of Pearl Parkway would also result in small reductions in traffic on other routes linking Gunbarrel to Boulder, with the most noticeable being a 3,000 vehicle per day reduction on the Diagonal.

These traffic projections indicate a 4-lane Pearl Parkway would attract only enough traffic to warrant a roadway with 2 through lanes. Therefore, improving the existing 2-lane connection (Pearl, 55th, Valmont, 61st, Andrus, 63rd) will meet motor vehicle needs. As a result, the City believes it cannot justify the construction of a new 4-lane roadway in this corridor to serve a demand that can be accommodated by the existing roadway network (if Scenario D is realized).

Improvements are needed for bus and bicycle access between Boulder and Gunbarrel. Transit and bicycle system functional capacity improvements as well as roadway efficiency and travel safety improvements can and should be made in the corridor -- without building a 4-lane roadway on new alignment.

MULTIMODAL CORRIDOR MAP



LEGEND

Multimodal Corridor —

The revised plan for roadway reconstruction along existing alignment will address the horizontal and vertical curvature, the narrow width, multiple ditch crossings, and the continuity at the Valmont/Pearl end.

The missing connection from 55th to Valmont will also be made. This extension will allow Pearl to connect with east Valmont and the Gunbarrel area without the current congested jog on 55th Street. Valmont west of 55th, and 55th south of Pearl will both be reorganized into a new intersection with the extended Pearl Parkway. There are wetland and Open Space issues to be addressed with this extension.

The City will also make improvements further West in this corridor. Pearl will be widened for on-street bicycle lanes east of Folsom. The addition of turn lanes at the intersections of Pearl/28th and Pearl/30th will enable efficient transit operations.

Pearl Street from 47th to 55th will not be widened. However, the geometric transition from a 4-lane to a 2-lane east of the Foothills ramps will be redone to improve safety. The same is true for the approach to the 55th Street intersection where geometry is confusing now.

VALMONT

Only a few specific improvements are needed in the Valmont corridor. These include significant improvements in the pedestrian system to provide continuity and safe crossings.

To facilitate continued growth in transit ridership, improvements will be made in transit access including installation of transit centers and upgrading of stops and shelters.

The intersections of Valmont with Wilderness and Center Green will be reconstructed and consolidated to increase safety and make bicycle and pedestrian crossings safer.

Minor improvements will be made at the Foothills intersection to reduce congestion and improve pedestrian and bicycle safety. The addition of a traffic signal at Airport Road will be considered as traffic warrants.

Improvements to provide connections with 55th Street and Pearl Parkway are described in the Pearl Parkway section above.

ARAPAHOE AVENUE

This corridor will continue to be the primary east-west route in Boulder and will have increased importance to the east as development outside Boulder Valley in East Boulder County continues.

Arapahoe is now a 6-lane roadway east of 28th Street (out to 55th) and the combination of Arapahoe and Canyon west of 28th provides six lanes of motor vehicle capacity. Adding more through lanes for motor vehicles in this corridor would accomplish little and is not included in this plan. Instead, strategic improvements will be made at key intersections to improve the efficiency of traffic flow.

Transit service will continue to rely on this corridor and the outside lanes will be made continuous across 28th and 30th to facilitate bus circulation through the intersections. Transit access will also be upgraded including the installation of transit centers at appropriate locations. Pedestrian facilities will also be upgraded and completed.

The intersection of Arapahoe and Foothills will continue to be the busiest in Boulder with over 75,000 vehicles per day. Based on the Foothills congestion management project, interchanges to increase capacity on Foothills Parkway are no longer planned. However, given the forecasted congestion (for motorists and transit vehicles) on Arapahoe, further study and consideration will be given to an interchange at Arapahoe.

Additional intersection improvements will be made at 19th Street and 30th Street to eliminate traffic flow restrictions and improve pedestrian access and safety.

The Boulder Creek multi-use path parallels Arapahoe from the west edge of town east to Foothills, providing excellent grade-separated circulation for non-motorized modes through these areas. However, many bicyclists will choose to ride on the arterial streets because of their directness and because of growing congestion on the Creek path.

Providing on-street bicycle facilities along the entire Arapahoe corridor will not be attempted. There is no potential on Arapahoe west of Folsomfor widening bike lanes given the mature trees behind the curbs, small building set backs, and limited right-of-way.

However, Canyon may eventually be widened to provide on-street lanes.

BASELINE ROAD

Baseline Road will have adequate roadway capacity for autos and transit throughout its length although intersection capacity improvements will be made at Baseline and 55th to reduce congestion and improve safety.

Major portions of the on-street bicycle lane system are complete and the section from Broadway to 30th will be completed. This will require some widening between 28th and 30th (where six lanes exist) or reallocation of the outside lane in this segment to a bus/bicycle lane serving the Williams Village student housing and adjacent commercial uses.

The on-street lane system will also be coordinated with the eventual replacement of the remaining older US 36 bridge. Completion of on-street lanes on Baseline from 55th to Cherryvale is also planned.

Baseline will continue to serve as an important transit facility and transit acccess will be upgraded throughout the corridor. This will include installation of up to 5 transit centers, upgrading of stops and shelters and targeted improvements to the pedestrian network.

The intersection with 9th Street will either be signalized or otherwise improved to make it possible for pedestrians and bicyclists to make it through the intersection safely. The intersection with Foothills Parkway will be modified to reduce congestion and improve pedestrian safety.

Finally, the City will remove the existing watered landscaping in the median between 30th Street and 55th Street and replace it with xeriscape to reduce unnecessary water consumption and avoid the build-up of puddles which discourage bicycle and pedestrian activity in this corridor.

TABLE MESA DR/SOUTH BOULDER ROAD

The Table Mesa Drive/South Boulder Road corridor represents one of the City's important multimodal routes. The section of Table Mesa Drive between Broadway and US 36 carries more daily transit passengers than any other corridor in Boulder (nearly 10,000 daily riders).

The 1989 TMP described planned improvements to Table Mesa Drive between Broadway and Moorehead that involved widening the street to a four-lane divided boulevard with an alternating median and turn lane system.

This roadway project would have involved acquiring and removing a row of homes on the north side of the street. Project cost was estimated at $4.5 million.

Traffic on Table Mesa Drive will grow only slightly under the Scenario D forecast. The City no longer intends to undertake the major roadway expansion called for in the 1989 TMP.

This is in part due to clear public opposition to such a project (particularly to the removal of homes). It is also due to further study of the corridor and a determination that bicycle, pedestrian and transit movements can be adequately accommodated within existing right-of-way limits only if the number of roadway lanes is not increased.

Since expansion of roadway capacity would have a low priority under the roadway infrastructure policies listed in Chapter 6.5, the City will instead pursue a more modest project that will:

- make pedestrian improvements including separating the sidewalks from the curb with a landscaped buffer and installing ADA-compliant ramps;

- add on-street bike lanes on each side of the roadway;

- make selected improvements in transit access including transit centers; and,

- make such changes in utilities and drainage as are required to complete the project.

In addition, the City will make other improvements in this corridor. Additional transit centers will be installed both east and west of the section described above. Sidewalks and crosswalks will be upgraded and missing links eliminated.

The following traffic signals may be added as traffic conditions warrant:

- the ramp carrying traffic from eastbound Table Mesa to northbound US 36; and,

- South Boulder Road at Manhattan.

figure 7-2. north-south multimodal corridors

BROADWAY: North US 36 to Greenbriar

28TH STREET/US 36: North Broadway to Baseline

FOOTHILLS PARKWAY: Diagonal Highway to US 36

55TH STREET: Valmont/Pearl to Baseline

BROADWAY

Much of Broadway has been widened or reconstructed since the 1989 TMP was adopted. However, substantial improvements are still needed throughout this corridor.

Broadway will continue to be a primary North-South transit route in Boulder. Service will become more efficient as the transit system converts from the current central-hub-oriented service to timed-transfer trunk service.

To facilitate continued growth in transit ridership in the corridor, the City will make improvements to transit access including new transit centers, improved stops and shelters and upgraded pedestrian facilities. Turning radius problems at Iris and Canyon will be corrected to improve bus movements and pedestrian safety.

Most of the corridor is served by an off-street bicycle path system south of downtown or the on-street lane system north of Norwood. There is little potential to widen Broadway for on-street bicycle lanes between Arapahoe and Iris. As a result, 13th Street will continue to serve as a parallel facility for bicyclists.

A missing link in the bicycle system from the top of the hill at Norwood to Iris will be eliminated through installation of on-street lanes North of Iris. Crossing of Broadway at Iris will also be revised and made safer. The intersections of Broadway with Lee Hill, Violet, and Quince or Poplar will be improved to provide for safer pedestrian and bicycle crossings. Intersection modifications to reduce congestion and improve pedestrian safety will be made at University and Baseline. The intersection of Broadway/US 36 will be rebuilt.

Finally, much of the roadway on Broadway is old and structurally-deficient. The City will make preventive maintenance investments as necessary to protect the public investment in this important facility. One such project will be the replacement of the bridge over Boulder Creek with a new bridge (same laneage).

28TH STREET/US 36

The 28th Street/US 36 corridor will continue to play an important role as a transit trunk line. To facilitate continued growth in transit

ridership, the City will make improvements in transit access north of Baseline. This includes transit centers and upgraded stops and shelters.

The increased frequency of buses stopping in the curb lane to serve commercial and employment destinations in the corridor will have some impact on corridor congestion. For this reason consideration should be given to making the current auxiliary lanes between Pearl and Colorado continuous through the intersections. These continuous outside curb lanes will also be critical to the bus operations up and down the corridor. Much of the continuous lane system is in place between Pearl and Colorado. However, there will need to be intersection modifications made and a wider bridge constructed across Boulder Creek.

Intersection widening (for continuous North-South through lanes) and bridge widening at the southern end of the multimodal corridor will be given high priority. The intersection of 28th and Pearl will continue to be a bottleneck for turning traffic (and buses between downtown and Crossroads). The addition of turn lanes as proposed in the 1989 TMP is still anticipated.

The segment of 28th from Pearl to Iris will also be an important transit route but constructing continuous outside lanes will be more costly. Only short portions of the system are currently in place and there are overhead power line issues to be addressed. This portion of the corridor is one of the areas in need of capacity enhancement if it is to carry forecast traffic volumes and also serve as a transit trunk line.

Substantial improvements are planned in this section, including completion of the pedestrian network, development of on-street bicycle lanes and related improvements including inter-section modifications for pedestrian safety and increased access control. US 36 from Iris to North Broadway will not be widened for through lanes. However, specific intersection improvement projects (such as the on-going addition of turn lanes at US 36 and Yarmouth and the need for similar improvements at Lee Hill) will be important given the projected increase in traffic associated with the anticipated growth in North Boulder.

Completely new bicycle facilities will not be necessary in the corridor north of Iris where shoulders currently exist. However, widening of shoulders at intersections will be undertaken where turn lanes (existing or future) have been added and the paved shoulders do not provide continuous bike lanes.

The City's intent is that there will be a continuous on-street bike lane system from rural US 36 south into the City at least as far as Pearl. However, some riders will always be uncomfortable with the traffic levels and turning vehicles found in the urban sections of the corridor, so additional, parallel facilities will also be developed.

Intersection reconstruction will be undertaken at Iris, Pearl, Canyon, Arapahoe and Colorado. These represent key mobility enhancements for all modes. Finally, the medians from Arapahoe South to Baseline will be upgraded with xeriscaped landscaping to save water consumption and provide an attractive entrance into the City from the South.

55TH STREET

The addition of on-street bicycle lanes from Arapahoe to Baseline (current project) will complete a missing link and improve the bicycle network on the east side of town.

Additional substantial improvements are being planned for the section of 55th from Arapahoe South to Baseline. This section is under construction.

To facilitate further ridership increases in this corridor, the City will invest in transit access, adding transit centers where appropriate and upgrading stops and shelters. Discontinuities in the pedestrian system will be corrected.

Planned improvements to multimodal corridors are listed by corridor in Table 7-1. The City intends that these corridors will have a high priority for funding because of their importance in ensuring multimodal mobility throughout the city.

TABLE 7-1. PROJECTS REQUIRED IN MULTIMODAL CORRIDORS

Broadway: North US 36 to Greenbriar

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
Broadway: University to Iris-Structural Deficiencies	System Preservation	Correct remaining structural deficiencies, replacement of bridge over Boulder Creek (85% state cost responsibility)	Similar project in Table 2.5 - '89 TMP	$9,300,000
Transit Access	Functional Efficiency	Provide improved bus shelters, sidewalk access, and transit centers at up to 7 locations	New Project	$350,000
Bike Lanes: Norwood to Iris	Travel Safety, Functional Efficiency	Add bike lanes to eliminate discontinuity between Iris and exising lanes on North Broadway	New Project	$1,500,000
Broadway/Bear Creek/Table Mesa Underpass	Travel Safety, Functional Efficiency	Build grade separation for bike/ped.	New Project	$600,000
Broadway/Skunk Creek Underpass	Travel Safety, Functional Efficiency	Build grade separation for bike/ped.	New Project	$500,000
Intersection: US 36	Travel Safety, Functional Efficiency	Reconfigure intersection to improve safety , adjust to adjacent land uses	New Project	$2,500,000
Intersection: Lee Hill	Travel Safety, Functional Efficiency	Install traffic signals and/or provide other means of safe pedestrian crossings	New Project	$90,000
Intersection: Violet	Travel Safety, Functional Efficiency	Install traffic signals and/or provide other means of safe pedestrian crossings	New Project	$90,000
Intersection: Quince or Poplar	Travel Safety, Functional Efficiency	Install traffic signals and/or provide other means of safe pedestrian crossings	New Project	$120,000
Intersection: Iris	Functional Efficiency	Increase radius from northbound to eastbound to accommodate buses	New Project	$35,000
Intersection: Canyon	Functional Efficiency, Travel Safety	Increase corner radii to accommodate buses and protect pedestrians	New Project	$70,000
Intersection: University	Functional Efficiency	Add right turn lane with free right raised ped crossings	New Project	$150,000
Intersection: Baseline	Functional Efficiency	Add westbound and southbound left turn lanes and install raised crossings on free right	New Project	$300,000
			Broadway TOTAL	$15,605,000

TABLE 7-1. PROJECTS REQUIRED IN MULTIMODAL CORRIDORS, Cont.

28th Street (US 36): North Broadway to Baseline

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
28th Street: Iris to Pearl	Travel Safety, Functional Efficiency	Correct pedestrian deficiencies, complete missing links, install raised crossings on free right; improve transit access; implement access control and accel/decel lanes as required; add bike lanes	Revised version of project contained in Table 2.5 - '89 TMP	$1,500,000
US 36: Violet to Iris	Travel Safety, Functional Efficiency	Add continuous bike lanes utilizing existing paved shoulders as appropriate	Replaces '89 TMP project (North Boulder Plan)	$500,000
Bridge over Boulder Creek	Functional Efficiency	Bridge widening; include reconstruction of pedestrian structure	Carried over from Table 2.5 - '89 TMP	$300,000
Intersection: Iris	Functional Efficiency	Add eastbound to southbound right turn; provide transit center; install raised crossing on free right	New Project	$300,000
Intersection: Pearl	Functional Efficiency	Add eastbound & westbound left turn lanes; reconstruct islands; carry bike lanes through intersection; install raised crossings on free right	Replaces '89 TMP project	$270,000
Intersection: Canyon	Functional Efficiency	Reconstruct islands; install raised crossings on free right	New Project	$280,000
Intersection: Arapahoe	Functional Efficiency	Reconstruct islands; connect third through lane in connection with bridge project; install raised crossings on free right for pedestrians	New Project	$70,000
Intersection: Colorado	Functional Efficiency	Add northbound to westbound & eastbound to southbound left turn lanes; carry bike lanes through; install raised crossings on free right	Replaces project from Table 2.5 - '89 TMP	$800,000
Arapahoe to Baseline Median Upgrade	Quality of Life	Upgrade medians to provide xeriscaped landscape for visual aesthetics	New Project	$250,000
			28th Street TOTAL	$4,270,000

TABLE 7-1. PROJECTS REQUIRED IN MULTIMODAL CORRIDORS, Cont.

Foothills Parkway: North City Limits to US 36

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
Foothills Parkway bicycle & pedestrian access	Travel Safety, Functional Efficiency	Reconstruct islands; install raised crossings on free right for pedestrians	New Project (from Congestion Management Plan Alt. III)	$9,500,000
East Boulder transit service	Functional Capacity (transit)	Provide increased transit service	New Project (from Congestion Management Plan Alt. III)	$10,400,000
			Foothills Parkway TOTAL	$19,900,000

55th Street: Valmont/Pearl to Baseline

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
55th Street: Arapahoe to Baseline	Travel Safety, Functional Efficiency	Build according to ongoing project study	Carried over from Table 2.5 - '89 TMP	$2,100,000
55th Street: Transit Access	Functional Efficiency	Provide up to 2 transit centers and upgrade transit access for pedestrians	New Project	$100,000
			55th Street TOTAL	$2,200,000

Iris Avenue: Broadway to 28th Street

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
Transit access	Functional Efficiency	Provide up to 2 transit centers and upgrade transit access for pedestrians	New Project	$100,000
Pedestrian access	Functional Efficiency	Upgrade sidewalks and crosswalks; complete missing links in pedestrian system	New Project	$100,000
			Iris Avenue TOTAL	$200,000

Pearl Parkway: Folsom to Gunbarrel

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
Pearl Parkway Extension	Functional Capacity (all modes)	Provide 2-lane connection from Pearl to 61st Street, rebuild intersection with Valmont, connecting Valmont to Pearl/55th; reconstruct 61st, Andrus, 63rd to improve roadway curves; provide continuous bike lanes; construct parallel multi-use path	Replaces $10 million project from Tables 2.5 and 2.6 - '89 TMP	$1,750,000
Intersection: 30th Street	Travel Safety, Functional Efficiency	Carry bike lanes through intersection; install raised crossings on free right for pedestrians	Replaces project from Table 2.6 - '89 TMP	$200,000
			Pearl Parkway TOTAL	$1,950,000

TABLE 7-1. PROJECTS REQUIRED IN MULTIMODAL CORRIDORS, Cont.

Valmont: 28th Street to Pearl Parkway Extension

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
Transit Access	Functional Efficiency	Provide up to 3 transit centers and upgrade transit access for pedestrians	New Project	$200,000
Pedestrian access	Functional Efficiency	Upgrade sidewalks and crosswalks; complete missing links in pedestrian system	New Project	$200,000
Intersection: Wilderness & Centergreen	Travel Safety, Functional Efficiency	Reconstruct and realign intersection; add traffic signal; provide pedestrian crossings	New Project	$350,000
Intersection: Foothills Parkway	Functional Efficiency	Add eastbound to southbound right turn lane, install raised crossings on free right for pedestrians	New Project	$260,000
Intersection: Airport Road	Travel safety	Add traffic signals as traffic warrants	New Project	$90,000
			Valmont TOTAL	$1,100,000

Arapahoe Avenue: 8th Street to East City Limits

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
Transit Access	Functional Efficiency	Provide up to 5 transit centers and upgrade transit access for pedestrians	New Project	$300,000
Pedestrian access	Functional Efficiency	Upgrade sidewalks and crosswalks; complete missing links in pedestrian system	New Project	$100,000
Intersection: 19th Street	Travel Safety, Functional Efficiency	Install traffic signals and/or provide other means of safe pedestrian crossings	New Project	$60,000
Intersection: 30th Street	Travel Safety, Functional Efficiency	Modify island to remove barrier to eastbound traffic; install raised crossings on free right	New Project	$150,000
Interchange: Foothills Parkway	Funtional Capacity (auto)	Re-evaluate potential need for interchange to provide capacity for east-west motor vehicle traffic	Carried over from Table 2.6 - '89 TMP	$50,000
			Arapahoe TOTAL	$660,000

TABLE 7-1. PROJECTS REQUIRED IN MULTIMODAL CORRIDORS, Cont.

Baseline Road: 9th Street to East City Limits

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
Transit Access	Functional Efficiency	Provide up to 5 transit centers and upgrade transit access for pedestrians	New Project	$300,000
Pedestrian access	Functional Efficiency	Upgrade sidewalks and crosswalks; complete missing links in pedestrian system	New Project	$100,000
Baseline / Skunk Creek Underpass	Travel Safety, Functional Efficiency	Build underpass for bike / ped	New Project	$404,000
Intersection: 9th Street	Travel Safety, Functional Efficiency	Install traffic signals and / or provide other means of safe pedestrian and bicycle crossings	New Project	$100,000
Intersection: Foothills Parkway	Functional Efficiency	Add southbound to eastbound left turn lane; install raised crossings on free right for pedestrians	New Project	$250,000
30th Street to 55th Street Xeriscape	System Preservation	Upgrade landscaped medians to xeriscape to eliminate need for watering	New Project	$300,000
			Baseline TOTAL	$1,454,000

Table Mesa/South Boulder Road: Vassar Drive to East City Limits

Project Facility/Location	Functional Category	TMP Update Project Scope/Plan	Project History	Project Cost
Table Mesa: Broadway to Moorhead	Travel Safety, Functional Efficiency	Add continuous bike lanes; correct pedestrian deficiencies including ADA ramps; improve transit access including up to 3 transit centers; relocate utilities as required; new cross-section is 4-lane undivided; project restricted to existing ROW	Replaces $4.5 million boulevard project from Table 2.5 - '89 TMP	$800,000
Transit Access	Functional Efficiency	Provide up to 2 transit centers (in addition to 3 in above project)	New Project	$100,000
Pedestrian access	Functional Efficiency	Upgrade sidewalks and crosswalks; complete missing links in pedestrian system	New Project	$100,000
Table Mesa / US 36 ramp	Travel Safety, Functional Efficiency	Signalize and modify eastbound Table Mesa to westbound US 36 ramp as traffic warrants	New Project	$200,000
Intersection: South Boulder Road / Manhattan	Travel Safety	Add traffic signals as traffic warrants	New Project	$90,000
			Table Mesa TOTAL	$1,290,000

Table 7-1. Total - All Categories $48,629,000

Additional projects needed to modify the existing street system in Boulder - which do not fall in one of the designated multimodal corridors - are shown in Table 7-2.

TABLE 7-2. PROJECTS NOT IN MULTIMODAL CORRIDORS

INTERSECTIONS

Project **Facility/Location**	**Functional Category**	**TMP Update Project Scope/Plan**	**Project History**	**Project Cost**
Lookout Road / 63rd Street	Functional Efficiency	Add southbound to east bound left turn lane	New Project	$250,000
Lookout Road / Spine	Travel Safety	Future signal warrant as traffic grows	New Project	$80,000
Lookout Road / Idylwild	Travel Safety	Future signal warrant as traffic grows	New Project	$80,000
Lookout Road / 71st Street	Travel Safety	Add traffic signals	New Project	$80,000
Lookout Road / 75th Street	Travel Safety	Implement 4-way stop	New Project	$80,000
Canyon Blvd / 11th Street	Travel Safety, Functional Efficiency	Install traffic signals and / or provide other means of safe pedestrian & bicycle crossing	New Project	$150,000
Canyon Blvd / 21st Street	Travel Safety, Functional Efficiency	Install traffic signals and / or provide other means of safe pedestrian & bicycle crossing	New Project	$60,000
9th Street / University Ave.	Travel Safety, Functional Efficiency	Install traffic signals and / or provide other means of safe pedestrian & bicycle crossing	New Project	$100,000
Folsom Street / Walnut Street	Travel Safety, Functional Efficiency	Install traffic signals and / or provide other means of safe pedestrian and bicycle crossings including medians for mid-crossing refuge; restrict left-turn vehicle access to Walnut	New Project	$150,000
11th Street / Spruce Street	Travel Safety, Functional Efficiency	Provide means of safe pedestrian & bicycle crossing	New Project	$60,000
15th Street / Spruce Street	Travel Safety, Functional Efficiency	Provide means of safe pedestrian & bicycle crossing	New Project	$60,000
			Intersections TOTAL	$1,150,000

TABLE 7-2. PROJECTS NOT IN MULTIMODAL CORRIDORS, Cont.

OTHER NEEDS

Project **Facility/Location**	**Functional Category**	**TMP Update Project Scope/Plan**	**Project History**	**Project Cost**
Walnut Street: 33rd Street to 47th Street	Travel Safety, Functional Efficiency	Build bike lanes and center turn lane where needed; extend / connect bike lanes to Boulder Creek Path	New Project	$400,000
North Boulder Subcommunity Plan Implementation	Functional Capacity - All Modes	Multimodal improvements including traffic signals, traffic mitigation, sidewalks & crossings, bicycle facilities, transit access facilities, transit service expansion	Some elements not City funded	$5,000,000
Locust Avenue: Broadway to 4th	Travel Safety, Functional Efficiency	Reconstruct street consistent with annexation agreement, project includes bike and ped improvements	New Project	$500,000
Bridge Replacement - 26th Street	System Preservation	Replace structurally-deficient bridge	New Project	$250,000
Community Improvement Investment Fund	Functional Efficiency, Quality of Life	Projects leveraged with other public funds and private funds	Projects Vary	$525,000
University Hill Sketch Plan Implementation	Functional Efficiency, Quality of Life	Variety of sidewalk, bicycle & streetscape projects - includes Main Street Alley at $205,000 and 13th St, Broadway to Euclid at $750,000	New Project	$1,754,000
Downtown Streetscape Improvements	Functional Efficiency, Quality of Life	Variety of sidewalk, bicycle & streetscape projects - includes 13th / Canyon intersection at $165,000, Broadway / Canyon intersection at $250,000, and 9th / Canyon intersection at $250,000	New Project	$24,500,000
Boulder Junction Plan Implementation	Functional Efficiency, Quality of Life	Projects currently under study	New Project	to be determined
Alley Paving	System Preservation, Quality of Life	Air pollution control, preventive maintenance	Continuation of project in Table 2.5 - '89 TMP	$2,000,000
			Other Needs TOTAL	$34,929,000

Table 7-2. Total $36,079,000

7.3 Roadway Functional Classification

The purpose of the functional classification system for roads and streets is to establish a common understanding with the public about the intended functional use of each road and street in the Boulder multimodal system.

Functional classification helps define what the future roadway system will be. It is determined today but describes the expected build-out of the roadway system by the year 2020.

The functional classification of a street or roadway provides a general indication of the ultimate (build-out) number of lanes and will be used by the City to anticipate right-of-way requirements.

Functional classification also provides a guide to the accommodation of alternative modes, since Boulder's road and street network serves as the primary infrastructure for all modes of travel. Finally, functional classification may be utilized by the City as a basis for a system of design standards that vary by classification.

The City of Boulder functional classification system recognizes four levels of roadway. Arterials and collectors are shown on the City's Functional Classification map at the end of this chapter.

The classifications are defined as follows:

PRINCIPAL ARTERIAL

purpose and character

The purpose of principal arterials is to provide direct service to major center(s) of activity and to provide continuity and length for crosstown trips. These roads serve longer trips and will have higher volumes.

A greater emphasis is placed on throughput circulation capacity than on local access. Principal arterials provide mobility for trips across Boulder and between Boulder and other neighboring communities. They normally will carry heavy traffic volumes.

connectivity

Principal arterials must connect to at least one other principal arterial.

design and cross section

This classification includes freeways and expressways as well as other divided and undivided multi-lane roadways.

The design of principal arterials will include a buildout cross section of four to six through lanes as well as additional turn lanes, acceleration and deceleration lanes and ramps as required.

Right-of-way requirements for principal arterials will vary according to the planned build out cross section.

On-street parking will generally not be provided and direct driveway access will not be permitted. Residential frontage will not be permitted.

However, there will be exceptions to these design parameters in certain commercial areas where on-street parking and driveway access may exist.

bicycle circulation

Bicycle circulation needs in freeway and expressway corridors will be met with parallel detached facilities and paved shoulders.

Bicycle circulation needs in other divided and undivided multi-lane roadways will be met with on-street lanes, with parallel detached facilities or with both, as appropriate.

MINOR ARTERIAL

purpose and character

The purpose of minor arterials is to provide direct service to commercial center(s) and to provide continuity and length for crosstown trips. Minor arterials will tend to be used less for regional travel than principal arterials. They receive traffic from collector streets and may carry heavy traffic volumes, especially in the vicinity of commercial centers.

connectivity

Minor arterials must connect to at least one other principal or minor arterial.

design and cross section

The design of minor arterials will include a buildout cross section of two to four through lanes as well as additional turn lanes, acceleration and deceleration lanes and ramps as required.

Right-of-way requirements for minor arterials will vary according to the planned build out cross section.

On-street parking will generally not be provided and direct driveway access will not be permitted.

Residential frontage will not be permitted.

However, there will be exceptions to these design parameters in certain existing areas of the City where on-street parking and driveway access may exist on minor arterials.

bicycle circulation

Bicycle circulation needs will be met with on-street lanes, although parallel detached facilities may also be provided if appropriate.

COLLECTOR

purpose and character

The purpose of collector streets is to collect traffic from local streets and provide corridors for traffic circulation through and between commercial areas and residential neighborhoods. The continuity and length of collectors may be less than a mile.

connectivity

Collector streets must connect to at least one other collector or to an arterial street. They normally perform the function of connecting local streets to arterial streets.

design and cross section

The design of collectors will be limited to a buildout cross section of two through lanes and may also include turn lanes where required.

In new development, on-street parking may be provided but direct driveway access will not be permitted. Residential frontage will be allowed if driveways connect to side streets or alleys.

In many parts of Boulder, the existing urban form has collector streets with driveways and direct residential access.

bicycle circulation

Bicycle circulation needs will be met with on-street lanes although existing collectors may not be high priorities for adding bike lanes in the short term.

LOCAL

purpose and character

The purpose of local streets is to provide direct access to residential and commercial property. These streets may be of varying lengths although most will be less than a mile in length. Local streets should not be dominated by vehicular traffic to the exclusion of use by bicyclists and pedestrians.

connectivity

Boulder will require a high degree of local connectivity in the local street system. A grid layout should be used to provide direct continuity for motor vehicles and non-motorized travel within the area and between it and adjacent areas.

design and cross section

The design of local streets will be limited to a buildout cross section of two through lanes. Turn lanes will normally not be included.

In new development, on-street parking may be provided and direct driveway access will be permitted. Residential frontage will be allowed.

bicycle circulation

Bicycle circulation needs will normally be met within the vehicle lanes in mixed traffic, although on-street lanes may be provided in some cases.

The functional classification map shown on the next page shows the City's designated principal arterials, minor arterials and collector streets. Roadways not shown in color on this map are local streets.

FUNCTIONAL CLASSIFICATION MAP

A detailed street plan has been developed for the North Boulder sub-community

North

LEGEND

- Freeway
- Expressway
- Principal Arterial
- Minor Arterial
- Collector